

SHELL'S BUSINESS MODELS FOR VILLAGE POWER

Going all the way!

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It is good to be here with you. Most of us in the Renewables business think of technology first and then later how we can make that technology work towards a sustainable business. At least that's my impression after 6 months.

Shell Solar is taking a very different approach. We are focussing on the customer – and then working back up the channel to the technology. I'm not talking about some sort of management theory here. To us the customer and the channel are the keys to building a sustainable, long-term solar business.

There is a real market there: we are convinced of that. In the developing world, one-third of the world's people still don't have electricity – two billion people! Win just ten percent of that market and there would be 200 million customers, say 40 million homes (some 2 gigawatts of power to be installed).

Market creation is going to be a long haul – but it doesn't mean it necessarily has to be impossible. In fact we believe installing solar systems in rural homes can be as economic as in urban areas (consider this dilemma.it only takes a one-off USD 500/installation to kick-start a rural marketing project. In fact in some countries it is even less. In Sri Lanka for instance the most popular Solar system costs 120 US Dollars only. If your compare these amounts to the developed world: In developed country programmes, such as in Germany, the incentive is USD 500 per year per installation

The key in rural markets is to get affordable, low-power, first generation units installed - and then ramp up capacity over time.

The first installations can be 50W with associated facilities. Three to five years later, these same customers will need more power, say an additional 100W with further accessories.

Finally, and this could be within 10 years, the countries where those rural projects were run will begin to participate in Renewable energy programmes to balance the environmental performance of their grid-connected sector.

Given the present levels of market development and cost of PV manufacture, incentives are absolutely vital – and likely to remain so for the next 5 years at least. At this stage no individual player be it government, NGO or industry, is able to develop a market by itself.

Financial support, as a pump primer, will continue to be critical – but we believe it best to set the targets, put the incentive cash at the customer interface and then let the market work. We do not believe in throwing money at mega-scale PV manufacturing facilities in developed countries – so stimulate demand, not supply.

The market is there if you can approach it in the right way. For instance, we intend to provide bundled services. Not just offering solar systems but all other 12-volt appliances available. To provide people in rural areas the benefits of electrification we must not stop at lights and TV's. Alongside with electrification there is whole 12-volt market being developed. If we are out there anyway, why not take this market along.

The role of the private sector is to build and sustain a local market infrastructure, and this is something we have plenty of experience of doing in for example the LPG business.

Shell has already years of experience developing rural solar power markets along these lines – in Bolivia, Sri Lanka, the Philippines, India, South Africa and Morocco. Some of the projects are more successful than others, but there are two key general lessons:

- i) learn from these different experiments, and
- ii) not one size fits all (there is a place for hybrids, fee-for-service, micro-credit, manual collection and all the other models. Each market is different – depending on social, demographic, legal and economic patterns).

A Review of the Shell's Village Power Business Models:

South Africa

- 50/50 Joint venture with Eskom, the local utility
- Fee for service, customers pay USD 10 per month
- Establishing 4-5 regional solar centres to manage collection and sales of appliances
- Commenced installations in late 1998, so far 6000+ systems installed
- Local staff for installation, maintenance and training

Sri Lanka

- Entered in late 1999 through acquisition of local PV installation company
- 100% Shell Subsidiary – Shell Renewables Lanka
- Pump priming by WB – USD 120 for 40 Wp system
- Outright sales through credit partners, who take low interest line of credit from WB
- 300 solar home systems in 1999; in 2000, new Shell company will sell 2000+ units
- 10 solar centres in 2000, 20 centres in 2001

India

- Shell entered in middle 1999 through establishment of 100% subsidiary
- Takes time to get to develop the in house expertise, knowledge of the market
- Selling solar home systems and yard light outright systems outright on cash basis
- Despite WB line of credit in place – it's not getting to our customers

- In final stages of completing PVMTI deal to support credit partners
- 8 solar centres in South India by end of 2000, 17 by end of 2001

Philippines

- A potentially revolutionary model, which we have called the SunStation
- Working closely in conjunction with our partners Community Power Corporation
- PV/LPG hybrids in densely populated communities; outlying homes get solar systems
- Testing if LPG can be replaced by CPC's Small Biomass Unit – running on coconuts
- Fee for service - higher than grid, but less than kerosene/battery charging
- Selling to provincial governments who are conscious of electorate

Morocco

- Shell has 40% stake in local PV installation company, entered in mid 2000
- Fee for service project in conjunction with Government who is offering concessions
- 7000 homes to be served – So far we have installed 1100 systems

‘Though each of the above model is different we can also draw some general conclusions’: customers need financial support, and strong local marketing operations need to be built – using local people and their skills. You have to go all the way to the customer and manage the distribution chain if you want to be there for years to come. You cannot simply dump modules CIF and expect a local entrepreneur to install and maintain your products by himself. You cannot turn your back on the 15% or so of installations that don't work first time This means setting up a local infrastructure that provides complete commercial

offerings – cells, panels, credit-schemes, maintenance, training, design and control units, local assembly and so on.

If we compare this to our grid connected markets in Europe we see that the approaches are not so very different. In both situations we are going all the way. In Germany for instance, our most developed market, we are building networks of installation and design partners, grouped around shell solar centres. We offer customers a fully tailored service, dealing with everything from permits and financing, to installation, maintenance and after-sales. Developing both rural and grid connect markets is a significant challenge – but it is worth doing – for a number of reasons. We all know the environmental benefits, so I'll pass over them. But, I am often asked why an energy multinational would be bothered getting into such a low margin field. I can thus summarise:

- Shell's main business is oil and gas production and marketing; but this will not last forever;
- Strategically, we should prepare ourselves for legitimate energy alternatives, and PV is one such;
- The PV business is a start-up industry. It is not profitable in the traditional sense (it loses money); most sales are dependant on subsidy, and will be for at least 5 years;
- Whilst acknowledging this commercial reality, we should strive to ensure cost discipline and tight management.

I don't want to take too much of your time today. So, I will just leave you with the three key messages which I have covered in my talk.

- First, we are a serious player in the Renewables business – and we are going to remain so.
- Secondly, I believe it is fair to say we are amongst the leaders in rural market development – what today we refer to as Village Power. We have done a lot, we know what we are talking about, and we believe “being there” is key.

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- Finally, and perhaps most importantly, Solar has to be commercial. Multi- or bi-lateral funds will be needed to kick-start the business – and, in the long run, it will be a commercial industry.

We intend to go all the way!